



“Audit Quality, Earnings Management and Corporate Governance”

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Abstract

This dissertation was written as part of the MSc in International Accounting, Auditing and Financial Management at the International Hellenic University.

There has been much discussion in recent literature regarding the earnings management issue. Several studies have revealed that earnings management is associated with earnings manipulation to conceal firms' performance and respectively boost investment decisions. This study examines earnings management from the scope of audit quality as well as corporate governance. To proceed with the results, a quantitative approach was employed, using a large sample of publicly traded European firms for the period 2013 - 2017. Establishing the study area in the European Union, including Switzerland, is advantageous and tries to expand the existed literature. Our results are not in consistent with prior research, supporting that the documented hypotheses regarding audit committee size, audit committee independence and audit quality have significant positive association with discretionary accrual as a proxy for earnings quality. These associations can be interpreted suggesting that in large listed companies, Shareholders, Management even though Audit Committee, seemed to act on behalf of their benefits and welfare. Consequently, there has been much criticism on auditor's services, for prioritizing profit instead of protecting the shareholders' welfare. Together these results provide important insights into the proper and legal firms operation and suggest that even though in big and well-organized firms, many steps of improvement need to be done, eliminating differences and enhancing transparency. Progress of auditing procedure, and ethic-based policy should be highlighted and adopted in the short-term future, while making more difficult the feasibility of earnings manipulation and the possible existence of economic scandals.

Keywords: Earnings Management, Audit Quality, Corporate Governance, Financial Reporting, Discretionary Accruals.

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TABLE OF CONTENTS

1	Introduction.....	1
2	Literature Review	5
2.1	Introduction	5
2.2	Audit Quality	6
2.3	Corporate Governance and earnings management	9
2.4	Agency theory	12
2.5	Gdp variation and earnings management.....	12
3	Data & Methodology	13
3.1	Introduction	13
3.2	Data	13
3.3	The proxy for earnings quality : Dependent variable	15
3.4	Independent variables.....	18
3.5	Control variables	20
4	Model Description	22
4.1	Descriptive Statistics	23
4.2	Correlation Matrix and Multicollinearity analysis	24
4.3	Results of the Regression Model	25
5	Conclusion and limitation	28
6	References	30

1 INTRODUCTION

Earnings manipulation as described by Healy and Wahlen (1999) became a criticized matter from the late 1990s to the early 21th century, inasmuch as it is a very important and acknowledged function in the corporate world and has a pivotal role in business survival and economic wealth. The demand of Auditing and Assurance is getting bigger and bigger, as the years come through and the corporate form of business changes and expands (Messier W. F. et al. 2008). As it is well-known, auditing offers integrity, transparency and assures that financial statements of a company are fairly and truly stated. Nowadays, many transactions and financial instruments have increased complexity and uncertainty, making their inclusion in the financial statements, at least problematic, Higson, A.W. (2009). Thus, effectiveness of Auditing procedure has become an issue of paramount importance and consequently the determinants of audit quality play a significant role in the Audit Assurance. M. Defond, J. Zhang (2014) mention that audit quality not only improves the financial reporting quality providing the credibility of the financial reports but also provides greater assurance. Accordingly, they emphasize that in order to determine the financial reporting quality; we use different characteristics, for example, the firm's size, audit fees, independent and non-independent audit committees or the underlying economic condition of a country. In addition, another determinant of audit quality is the audit time. Leventis, S. & Caramanis, C. (2005) found that there is a positive relationship between audit hours spent and the company size, which is noticed to be higher for companies interested in equity finance and audited by big multinational audit firms. Based on that, we can define higher audit quality as greater assurance that the financial statements faithfully speculate the firm's underlying economic conditions.

Important part of the audit process is the assurance of the quality of the financial statements by securing their accuracy and their credibility. Financial statements are the link of the company and its external environment, that is, shareholders, government, financial institutions, potential private investors, analysts, suppliers, customers etc. Assuring the users about the credibility of the financial reporting environment of the company is a very important issue. As a result, a great deal of research is dedicated on

the quality of the financial statements, a subject that is addressed through different approaches. M. Defond, J. Zhang (2014) mention the notion that the responsibility of the auditor is compatible with the GAAP, which require auditors to evaluate financial reporting quality. These standards highlight all the mandatory responsibilities that an auditor must comply with, judgmental including bias assuring the level of the financial reporting quality.

This thesis approaches the subject of the company's financial reporting environment through the concept of earnings management. Earnings management is the intentional alteration of financial reports from the company's managers on purpose to misinform a portion of the stakeholders about the financial efficiency of the company or to influence certain contractual outcomes which depend on the reported results (Healy & Wahlen, 1999). This occurs because of ownership and management segregation, which leads very often to information asymmetry between managers and shareholders. When a conflict of interests occurs between the two or the owners cannot fully perceive the goals of the management team then it is probable that the management team might use discretion upon financial reporting within the boundaries of the Generally Accepted Accounting Standards (Milgrom, P. R., & Roberts, J. D., 1992). Evidence reveals that since reporting earnings are linked with the value of the firm, managers tend to judgmental manipulate company's financial reporting, either for example in an economic upturn managers can artificially depress profits for their own incentives or in an economic downturn, hidden reserves can be used to artificially increase the revenues of a company, camouflaging the deterioration of the company's financial performance by artificially manipulate the outcomes that depend on reported accounting numbers.

There are two basic ways that earnings management and in general financial reporting quality can be influenced. First is the level of audit quality, second is the effectiveness and the principals of the company's corporate governance. In other words, there is an external factor related to the company's environment, which is the ability of the auditors to detect and prevent earnings management practices and an internal, which depends by the effectiveness the internal audit procedures and the incentives of the managers to affect the reporting results. In agreement, DeFond and Jiambalvo (1994) showed that managers have the tendency to an earnings "bath" for obtaining a proficient opinion

from the auditors and they strongly advocate that there is a tremendous evidence that is supported with positive manipulation in the year prior to violation.

Soderstrom and Sun (2007) supported that although IFRS adoption should lead to convergence of the accounting policies, the existence of the legal, political and the institutional, in overall, system of the different countries are very likely to affect the accounting quality of the firms between countries. Regarding financial reporting quality and financial reporting quality, there are papers discussing the impact of the IFRS adoption to the quality of the reported earnings. According to Capkun et al. (2016) several researches on the transition to the IFRS and its effects on earnings management did not provide clear evidence on whether that leads to greater earnings management or not. IFRS are structured in a way to be very flexible regarding the choices on accounting policies, thus providing many opportunities to firms for higher level of earnings management. However, the accounting system constitutes a complementary component (Ball, 2013) and the general result on the financial reporting quality is mostly determined by firms' incentives on the transparency of their reporting (Capkun et al. 2016; Ahmed et al. 2013). On the other hand, Barth, Landsman, Lang (2008), show that International Accounting Standards increases earnings quality because the standards are principle based, and they show strong evidence that the use of that standard is associated with fewer earnings' management and significant high relevance value. Another research taken place in Europe showed that firm size and time did not affect the earnings management occurrence, but large firms with big leverage seemed to have a propensity in the earnings manipulation, Aussenegg, W., Inwinkl, P., & Schneider, G. (2009).

Furthermore, financial crises irritate significant transformations in the economic environment. Dimitras et al. (2015) investigated that when countries face GDP fluctuations and more specific countries who face financial crisis and thus a GDP deterioration, are more likely to detect earnings manipulation by managers. Therefore, our quandary was to elicit not only to whether important indicators like GDP decline have crucial meaning for managers giving them the incentive to artificially manipulate financial reports on financially distressed companies to conceal the financial problems, but to also what would be the consequences if a country face economic recovery. On

the other hand, DeFond and Jiambalvo (1994) show that managers have the tendency to an earnings “bath” in order to acquire a qualified opinion from the auditors and they strongly advocate that there is a tremendous evidence that is supported with positive manipulation in the year prior to violation. To that extend, the current research analyses data from countries within the European area, focused more on those with higher financial power. Even though earnings management issue has been analyzed a lot through the years, it remains a very significant affair for companies globally. That was the motivation to proceed with further research combining the quality of audits, the effectiveness of corporate governance and the audit independence. The purpose of this study is to explore the factors that strengthen the earnings manipulation and to identify if the regulatory framework of the chosen countries enhances the transparency of financial statements or not. It is worthy to be mentioned that from 821 observations in total, the 621 coming from very dynamic countries, with the United Kingdom mostly highlighted.

There has been much investigation regarding the important determinants of earnings management, i.e. the firm’s characteristics, audit quality and corporate governance. However, the existing studies have reported mixed results. This study is approached with quantitative methodology, collecting information from Amadeus Database, trying to evaluate and synthesize the findings from big listed European companies, taking into consideration data from 2013 to 2017. Despite the existence of this monitoring committee, there were many corporate failures in recent years, such as the accounting scandals by Tyco International, WorldCom, Parmalat etc. This has brought about doubt in the minds of shareholders on the credibility and reliability of financial reports. It was as a result of the foregoing statements that researchers consider it of paramount importance to examine the effect the audit committee has on earnings management. However, the literature relevant to the connection between audit committee characteristics and earnings quality is inconclusive. Some studies found positive relationships (Beasley et al., 2000), while others found negative associations (Lin, J. W., Li, J. F., & Yang, J. S., 2006). In addition, some researchers (Nelson, S., & Jamil, N. N., 2012) reported no relationships.

The results for the first hypothesis showcase the existence of a significant positive influence between the audit quality and the occurrence of earnings management, as much as the second hypothesis indicates a strong positive link between the independence of the audit committee and the earnings management existence, while the third hypothesis reveals that audit committee size and cases of earnings management are associated in a positive way, as well.

Until now, no previous study has examined the interaction between audit quality earnings management and corporate governance of countries with financial power within the European area. As it is mentioned above, for the countries who faced financial problems, no one disagrees with the increased tense in earnings manipulation, but there is no clear evidence of what results are expected for the more developed counties. As such, the present study contributes to the literature in various ways. The aforementioned chosen sample from nine countries all over the Europe, taking into consideration financial criteria, is pioneering. In this aspect, the current review emphasizes on the possibility that assured financial statements, even from big 4 auditing companies, may conceal earnings management on behalf of the managers or shareholders prosperity.

In the next chapters, a prior literature review is analyzed, following with the hypothesis development and research methodology. Then, the regression model and the variables are extensively explained and determined, while presenting the empirical results and conclude with the findings of this study. The final section provides limitations and concluding remarks of the research.

2 LITERATURE REVIEW

2.1 INTRODUCTION

The reliability of the financial reporting statements seems to attract several researchers worldwide. There is a great deal of literature review regarding earnings management and the quality of the audit procedure, as well as the role of corporate governance policies on the above. For this reason, literature review has been divided into two

categories regarding audit quality and reliability of financial reporting and the role of corporate governance and the audit committee on earning management. However, the categorization might not be clear in some cases since the above are part of the same subject in the end, meaning the quality and the accuracy of the financial reporting statements and the association with those with responsibility of the governance of the company and the auditing procedures.

2.2 AUDIT QUALITY

Despite of the number of the researches on the subject of audit quality, there is a great difficulty on defining accurately what audit quality is and how to measure it, since it depends on the scope of each independent research and the approach of each researcher (Watkins et al. 2004). According to the Financial Reporting council:

“There is no agreement on a common definition for audit quality that can be implemented as a benchmark against which actual performance can be measured” (Sulaiman, N. A., & Turley, S., 2011).

However, most of the research are concentrated on the characteristics and the factors of audit quality, such as the audit committee size, tenure, audit fees, auditor firm size, as well as several other factors discussed in the international literature. The other major scope of the international research on the subject is the effect of the audit quality on earnings management.

Based on Getie Mihret, D., & Wondim Yismaw, A. (2007), audit quality is a function of the expertise of staff and the scope of services provided. In addition, the audit quality is rather affected by the audit plan and the way that audits are planned, executed and communicated. To understand the link that relates audit effectiveness and the level of audit fees, firm performance and other factors, there is a need to go a step back and recognize firstly the concept of them separately.

According to, Malik et al. (2017), during the initial years of auditor tenure, auditors usually have limited client – specific knowledge, consequently diminishing the auditors’ likelihood the he will indeed succeed in detecting a material misstatement. In other words, the auditors’ quality has significant negative impact during the initial year.

According to prior research by Myers et al. (2003), the longest the auditor tenure on average, resulted in auditors placing higher limits on extreme decisions of the management when reporting financial performance. Furthermore, they observed that the degree of discretionary accruals decline significantly with higher auditor tenure. This proposition suggests that as this relationship increases, auditors limit further management decisions to use accruals to increase current period earnings. On the other hand, on a research conducted by Deis Jr, D. R., & Giroux, G. A. (1992) found that auditor tenure and audit quality was negatively associated, however, it should be noted that their results could be questioned as their sample is incorporating only small and medium CPA firms. Identical research by Lys, T., & Watts, R. L. (1994) provide evidence that independence was decreasing the level of auditor tenure.

Ball, F. (2013) evaluated the impact of auditor-client relations measured by the audit tenure as well as the subsequent discounts after the initial engagement to the audit quality. The study did not show any evidence of audit quality impairment arising from the person-to-person relationships, however that is not the case regarding the auditor firm and client firm relationships. In addition, the study provided evidence that audit fees in the years following the initial engagement do indeed increase so, as a result, there are not enough reasons supporting quality undermining arising from price pressure.

Other auditing literature findings suggest that audit quality of Big 4 is remarkably higher when compared with that of non-Big 4 auditors, DeAngelo (1981). Big size firms have more reasons to provide a greater deal of auditing effort in order to reduce the litigation loss, while maintaining their independence and professional reputation. Furthermore, since big firms are less prone to being dependent to a single client, they have greater control on them and thus there are less possibilities for earnings manipulation from the clients. Kim et al. (2003), also came to the conclusion that larger audit firms have reasons to prevent or decrease the earnings management in the event of a conflict or a convergence of reporting incentives (income-increasing accounting choices) between the managers and the auditors and that there is a high litigation risk in case of failure to identify income restatements.

Dopuch, N., & Simunic, D. (1980) also support the fact that famous audit firms can provide greater audit quality due to the fact that they are exposed to greater reputational risks. Other studies showcase that reported earnings forecasts of companies that are audited by big size auditors are actually more accurate than non-big size auditors, implying more accurate financial reporting (Chen, Lin and Zhou, 2005). In contrast, there are also some studies which do not find any significant evidence supporting higher financial reporting quality and auditor size (Maijor and Vanstraelen, 2006). Several studies have showed the connection between Big 4 firms and audit quality using auditors' size as a proxy to measure audit quality. As far as the majority linkage of audit quality and Big 4 firms, there are those who advocate (Campa D. 2013) that there no strong connection between audit quality and the type of the auditor corresponding to the audit quality proxies investigated. On the other hand, Big 4 audit firms provide higher quality audits and offer greater reliability to clients' financial statements than the non-Big 4 auditors. Krishnan (2003), demonstrates that Big 4 auditors have better results at constraining client earnings management in comparison to non-Big 4 auditors; they find that clients of non-Big 4 auditors have higher levels of discretionary accruals. The literature in the same context recognizes, that based on prior findings, have pointed out that audit volume is primary kyra significant determinant of audit quality. Thus, based on prior researches that Big 4 auditors deteriorate their clients' ability to manage earnings through accruals, we expect that their clients will chose to more real earnings management given motivations to manage earnings. This leads to the formulation of the following hypothesis:

H1: There exists a significantly negative association between audit quality and the occurrence of earnings management.

As Srinidhhi and Gul (2006) proposed on their research, higher audit effort leads to higher audit quality that translates to better accrual quality. Their findings suggest that accrual quality is positively associated with audit fees, which is consistent with the supposition that higher audit fee does reflect higher audit effort and better judgments about the propriety of accruals, it is, however, not consistent with the supposition that audit fee is associated with economic bonding. Ashbaugh et al. (2003) reported a negative association between the audit fees and the probability of them meeting their

earnings benchmarks. Abbott et al. (2004) document increases in audit fees with client's risk of managing earnings upwards, resulting in earnings management surprises.

2.3 CORPORATE GOVERNANCE AND EARNINGS MANAGEMENT

The system of corporate governance is this by which companies are directed and controlled (Cadbury, 1992). It is directly related with achievement of the company goals and it is also related to the ability of regulatory initiatives to pervade the organization and ensure compliance with rules – that is through specifically designated officers, audit committees and other internal structures (Power, 1997, p. 41 DeZoort, F. (1997), has supported that the audit committee is responsible for the oversights regarding matters related to financial reporting, auditing as well as overall corporate governance. In his paper, he also investigated the adequacy of the audit committee and its members in fulfilling their roles as well as their most important oversight responsibilities.

Regarding earnings management, Schipper (1989)¹ defined it as *“an intentional intervention in the external financial reporting process with the intent of obtaining private gain”*. Similarly, Healy, P. M., & Wahlen, J. M. (1999)² state that *“earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.”*

The association of the audit committee and its different characteristics with the earnings management activities is part of a great deal of research. Soliman et al. (2014) through an empirical study of the Egyptian Listed companies concluded that the independence of the audit committee, the experience of its members, the audit committee meetings and audit quality have a negative correlation of a significant degree with earnings

¹ Schipper, K. (1989). Earnings management. *Accounting horizons*, 3(4), 91.

² Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting horizons*, 13(4), 365-383.

managements, measured by discretionary accruals. However, the size of the audit committee does not present any significant relationship.

The association of the audit committee characteristics and the quality of financial reporting is also part of the research of Lin et al. (2006). Specifically, the characteristics described are the size of the audit committee, the level of independence, the financial expertise of its members, its activity, and the stock ownership. The findings of this research support that a negative correlation exists between the size of the audit committee and the occurrence of earnings restatement, while the rest of the characteristics did not appear to present a significant impact on the financial reporting quality. McMullen (1996) determined the association of the presence of an Audit Committee and the reliability of the financial reporting statements through five potential consequences, measuring them as shareholder litigation claiming fraudulent activities by management, quarterly earnings restatements, SEC actions, and auditor turnover involving an accounting disagreement. The results of the study support that, companies with audit committees are less likely to present unreliable financial statements.

The issue of audit committee independence is much debated. Corporate governance regarding the financial reporting environment includes also those related with the management of the company who are in favorable position regarding their ability to influence financial reporting. Lin et al. (2010) investigated the relationship between earnings management and various audit quality and corporate governance variables through a meta-analysis of prior studies. The results indicate negative relationship between earnings management and the variables of the corporate governance regarding the independence and the expertise of the board of directors, as well as the independence, the size, expertise, and the number of meetings of the audit committee. On the other hand, equity involvement of the audit committee has a certain effect on earnings management. Regarding audit quality, auditor tenure, auditor size, specialization and auditor independence (measured by fees) they present also a negative relationship with earnings management. Therefore, the independence of the audit committee plays an important role in enhancing its role in preventing restatements. Regarding the composition of the audit committee, the Code's principles

recommend that independent directors should constitute the majority. According to the aforementioned discussion, the following hypothesis can be formulated:

H2: There is significantly negative association between audit committee independence and the occurrence of earnings management.

Karamanou & Vafeas (2005) in their research called “The association between corporate boards, audit committees and management earnings forecasts: An empirical analysis”, studied the association of effective firm governance, i.e. corporate boards and audit committees as well as quality of financial disclosing, proxied by management earnings forecasts. The results indicate that effective corporate governance is related with less information asymmetry between management and shareholder, meaning higher financial reporting quality. Meanwhile, disclosure policies in those firms are shaped to protect shareholder, especially in cases when results are worse than expected. In such cases, there is a high likelihood that managers will proceed with disclosure of bad news to the shareholders however; this is also accompanied with management forecasts, meaning lower accuracy on forecasts. The possible explanation for this is that well-governed firms are more dutiful in their obligations not to mislead shareholders.

Regarding earnings management and financial reporting quality Leuz et al. (2003) suggested that management practices are less likely to occur in companies operating in countries with developed equity markets, dispersed ownership structures, strong investor rights, and applications of law. This indicates investors’ protection and the right institutional background is an important parameter in corporate policy choices and earnings management activities, which is also influenced by the different institutional characteristics of different countries. When the appropriate legal systems exist, with the purpose of protecting outside investors, the possibility and the ability of the insiders to manipulate firm resources or reporting results is limited thus earnings management is limited in countries with strong investor protection policies. Finally, these findings support the association of corporate governance and quality of financial reporting. Therefore, based on the above discussion, the following hypothesis can be formulated:

H3: There is a significantly negative association between audit committee size and the occurrence of earnings restatement.

2.4 AGENCY THEORY

The concept of agency theory to comprehend the relationships between agents and principals. Hussaini, B. A. L. A., & Yahaya, A. (2014) explore this concept of agency theory and the applications towards the development of large entities. They concluded that the owners of the companies have different interests with those of the directors creating a source of conflicts. Incompatible incentives may drive a wedge among stakeholders and prompt financial losses leading to agent-principal problem. Therefore, agency theory is considering to be relevant while it explains the audit committee which functions a monitoring mechanism to reduce agency cost (Menon & Williams 1994). Finally, Menon, K., & Williams, J. D. (1994) states that due to this separation of duties, public companies have the ability to attract more audit committee members in the current environment while it minimizes the agency problem. Overall, evidence suggests that the proportion of board size held by outside directors have significant relation with audit committee size while large boards should obtain greater monitoring benefits than smaller boards and should be more likely to rely on audit committee size.

2.5 GDP VARIATION AND EARNINGS MANAGEMENT

Cohen et al. (2008) documented the impacts of the Sarbanes-Oxley Act, or else SOX, which is introduced in 2002 in the accrual and the real earnings management. While accrual earnings management seemed to follow an increasing trend till the introduction of the Sarbanes-Oxley Act, they have started a steady decline after the its passage. The exact opposite effect is true about the real earnings management, which seems to follow an increased trend after the passage of SOX. However, the changes described are not solely attributed to SOX, since the increased law enforcement actions of the government and the higher level of investors' and auditors' vigilance might have also been part of the decrease of the earnings management activities.

Dimitras et al. (2015), examined how the financial crisis of 2008 affected earnings management practices in Mediterranean countries. The study focused on non-financial companies experiencing financial distress situations and that have been audited by a Big 4 company. Furthermore, their study examined also the degree of earnings manipulation, which is affected by the GDP fluctuations. The results show that

Portuguese, Greek and Spanish companies, which were audited by a Big 4 firm, had a negative relation with earnings managements. Conversely, Italian and Irish companies had a positive. Accordingly, it seems that earnings manipulation is reduced during recession in all of the countries of the sample except for Ireland, which presents a higher scope of earnings manipulation. Finally, according to Eichengreen et al. (2014), when a country suffers from a financial crisis, a deterioration of GDP is detected. In addition, they conclude that the GDP is a variable suitable for understanding whether a country suffers from recession or not. While there is limited empirical evidence on the connection that exists between earnings quality and firm valuation, theoretical and empirical evidence, regarding the effects of earnings quality on the cost of capital, suggest that earnings of inadequate quality can lead to a greater information risk, which in turn results in a higher cost of capital.

3 DATA & METHODOLOGY

3.1 INTRODUCTION

In this section, we describe the procedure for identifying companies that restate earnings and introduce variables which are expected to be correlated with earnings management. In addition, we had to exclude the rest of the EU countries while we describe the main characteristics that earnings quality is affected based upon quantitative data to explore the impact of on the earnings quality. This part of the study consists of the information provided by data collection as well as the development of a model and finally the testing of the model, with the help of the statistical tool of Gretl. This chapter is comprised in four sections. At first, we describe the collected sample to carry out our research, then we proceed by analyzing our methodology and next we analyze the control variables on our model and the rest of our variables.

3.2 DATA

In order to demonstrate how earnings management are influenced by auditors, we investigate an initial sample that was obtained through the Amadeus database that is consisted of the largest 192 European firms based on market capitalization from 2013

to 2017. In addition, we had to exclude the rest of EU countries either why they did not meet the market value threshold or according to Gruppe and Lange (2013) it was proved that countries with GDP fluctuations or countries who suffers from financial crisis, tend to minimize the earnings manipulation. We excluded 254 observations as we noticed that some values in our data were missing. Moreover, our sample focuses on 9 European countries with emphasis on the United Kingdom, France and Germany because we organize our sample regarding some corporate governance system traits. Some systems are described by wide dispersed ownership (outsider systems), others are described by concentrated ownership (insider systems). We primarily focused in outsider systems of corporate governance (notably in the UK) while the conflict of interest is between strong managers and weak shareholders. However, there are differences are also rooted in variations in countries' legal, regulatory, and institutional such as policies that promote the adoption of specific forms of governance and other institutional factors, within which they are being scrutinized.

Table 1: Description of the Data Sample

Country	Freq.	Percent	Cum.
Sweden	22	2.68	2.68
France	83	10.11	12.79
Switzerland	15	1.83	14.62
Germany	50	6.09	20.71
Belgium	10	1.22	21.92
Ireland	5	0.61	22.53
Lithuania	5	0.61	23.14
Italy	10	1.22	24.36
United Kingdom	621	75.64	100.00
Total	821	100.00	

The Table 1 is describing the distribution of our sample by various classifications. In addition, this panel data illustrates how our sample is distributed onto 9 European countries, giving emphasis on the fact that more than 50% of our data is accumulated in

the United Kingdom and more specific the (75.64%), followed by France (10.11%) and Germany (6.09%). The rest of our sample is comprised from 6 countries.

3.3 THE PROXY FOR EARNINGS QUALITY : DEPENDENT VARIABLE

The purpose of the present dissertation is the identification of the relationship between earnings quality and some financial and non-financial variables that have an impact on the company and the environment in which it operates. Thus, we proceed by estimating a model that can predict how firms manage their earnings based on their size, region and auditor's characteristics. Earnings quality is, in accounting terms, the way of recognizing and reporting earnings. It represents how good the reported earnings reflect a company's actual income. Companies that use conservative accounting practices are found to having higher earnings quality. However, earnings quality is a qualitative variable and can be difficult to measure. Instead, raw accruals can be used as a simple approximation to quantify and evaluate earnings quality. A more precise approximation of the earnings quality though, demands the use of the discretionary accruals. Total accruals can be split into two sub-categories. The first category is the non-discretionary accruals while the second category is the discretionary accruals. Non-discretionary accruals are all factors that affect the business condition under which a company operates, such as growth and sales. On the other hand, the discretionary part of the total accruals represents all management choices. In agreement with previous researches, we use discretionary accruals as a proxy for financial misappropriation or earnings quality. Most of the preceding literature uses the Modified Jones (1991) model, as it was deemed preferable to other existent methods at the time, in detecting abnormal accruals, i.e. discretionary accruals (Dechow and Skinner, 2000). Therefore, abnormal discretionary accruals (estimated using different ways of the Jones Model) has become the favored proxy for measuring managerial discretion. Various accruals measures have also been used for the study of earnings quality. As far as these investigations are concerned, (Thomas and Zhang, 2000) it is important to mention that earnings management and earnings quality provide evidence that extreme accruals are indeed less beneficial, in agreement with the audit quality literature that have been cited.

We concluded that considering the modified Jones model that is based on the previous research of Dechow et al. (1995) as they provided repeated evidence that this model produces sturdily built results both at 1% and 5% significance level. Thus, we estimate earnings quality through unexpected or discretionary accruals as per Modified Jones model, which is the difference between a firm's total accruals and the normal accruals from our Equation (1):

$$DACC = \frac{TA_{it}}{\text{Average Total Assets}} - \widehat{NA} \quad (1)$$

Discretionary accruals (DACC) can be described as the difference between total accruals (TA) and non-discretionary accruals (NDA). In order to calculate discretionary accruals, we have first calculated total accruals (TA) as follows (Hribar & Collins, 2002). Accordingly, we can approach the computation of total accruals in two different ways: either from the balance sheet or from the cash-flow-statement. On the former, total accruals are calculated as the deduction of current liabilities (except the current portion of long-term debt) from current assets (except cash items) and depreciation. In our research, we have used the last-mentioned approach where total accruals are calculated as the difference between net income and the operating cash flows instead of the balance sheet as ((Hribar & Collins, 2002) described in their research. In particular, the estimation for total accruals and normal accruals were calculated by the following Equations (2), (3):

$$TA_t = NI_t - CFO_t \quad (2)$$

Where:

TA_t : Total Accrual in year t

NI_t : Net Income in year t

CFO_t : Cash Flow from Operating activities in year t

Accordingly, for the computation of normal accrual we took into consideration the following equation (3):

$$\widehat{NA} = \hat{a} + \hat{a}_1 \frac{1}{Average\ Total\ Assets} + \hat{\beta}_1 \frac{(\Delta Revenues - \Delta AR)}{Average\ Total\ Assets} + \hat{\beta}_2 \frac{PPE}{Average\ Total\ Assets} + \varepsilon_{it} \quad (3)$$

In those functions, $\Delta Revenues$ represents the change in revenues from the current year to the previous year, ΔAR represents the change in accounts receivable while the PPE represents the gross value of property, plant and equipment during the current year. The average total assets of each company scale all variables in order to avoid heteroscedasticity problems.

Once the model is estimated and the values of the discretionary accruals are obtained the construction of the dependent variable, that is the earnings quality, will be finalized. From there on, an effort is given to identify the relationship of earnings quality and financial and non-financial variable that may influence a company's earnings. These variables namely are:

- *Audit Committee Size*
- *Return on Assets (ROA)*
- *Financial Leverage*
- *Cash flow from operating activities*
- *Audit Quality*
- *GDP Growth*
- *Audit Committee Independence*
- *Accounting Practice used*

Accordingly, a cross – sectional model was used in order to estimate how earnings quality is affected by some characteristics such as those that are depicted on the Equation (4):

$$EarningsQ_{it} = a_0 + \beta_1 Audit_Com_Size_{it} + \beta_2 ROA_{it} + \beta_3 Lev_{it} + \beta_4 Acc_Prac_{it} + \beta_5 CFO_{it} + \beta_6 AuditQ_{it} + \beta_7 GDP_{it} + \beta_8 Audit_Com_Indep_{it} + \varepsilon \quad (4)$$

3.4 INDEPENDENT VARIABLES

To synthesize, although assorted results have been documented, prior studies also include various variables which are often used to control factors influencing management's incentives to manage fraudulent activities. There is an important number of measures of firm effectiveness and performance that is reported to be related with earning management (or earnings quality), which provided major insights (McNichols, 2000). This study also highlights the financial leverage (Lev), which is measured as the ratio of the total liabilities divided by the total assets. Accordingly, prior investigations have used different types of control variables such as GDP, Leverage of the firm, Return of Assets and Cash flow from operations (Carcello and Nagy, 2004; Myers, 2003). It is proved from previous researches that the magnitude of discretionary accruals increases as the leverage, GDP and ROA of the firms increase. Thus, the audit quality becomes progressively worse. Our research also provides evidence for the effect of cash flows from operating activities (CFO) to capture the differences in performance across firms in different countries and to point out the effects of the economic activity on earnings manipulation. From prior research of Jiang et al. 2008, we can elicit that firms with a strong operating cash flow performance are not as likely to manage discretionary accruals upwards, since they are already performing well. In addition, the possible explanation to these may be because the increase in leverage, growth and ROA, directly affects the effectiveness and the profitability of the entities, which may become an incentive for the managers to use their discretion with regard to accruals (Chen, Lin, and Lin, 2008).

On the world of the complex financial reporting, (IFRSs) were imported in the beginning on or after first January of 2005 for listed companies, advocating the concept of a uniform financial reporting system in which entities financial statements have to disclose more information, with ensuing implications about the role of external auditors, who are now required to verify this information. Most of the accounting standards in the IFRSs feel the necessity for the use of fair value measurement, as it depends upon a greater use of judgement (both by management and auditor) in the preparation and audit of financial statements (Sulaiman, N. A., & Turley, S, 2011). Finally, (Adibah Wan Ismail et al. 2013) confirm that IFRS adoption is totally correlated with higher quality of

reported earnings. Namely, it was concluded that reported earnings in the period after the adoption of IFRS is associated with lower earnings management. Below, at the Table 2, the information of both dependent and independent control variables is analytically presented.

Table 2: Dependent and Independent Control Variables

VARIABLES	INDICATORS	MEASUREMENT
DEPENDENT VARIABLES		
DISCRETIONARY ACCRUAL	DACC	Measured by Modified Jones Model
INDEPENDENT VARIABLES		
ACCOUNTING PRACTICE	<u>Acc_Prac</u>	Dummy variable that takes the value of "1" if the accounting practice is IFRS, otherwise "0"
RETURN ON ASSETS	ROA	Return on Assets ratio
AUDIT QUALITY	<u>AuditQ</u>	Dummy variable that takes the value of "1" if the auditor is Big 4 firm, otherwise "0"
FINANCIAL LEVERAGE	Lev	Debt to asset ratio
AUDIT COMMITTEE SIZE	<u>Audit_Com_Size</u>	It is the total number of audit committee members
AUDIT COMMITTEE INDEPEND.	<u>Audit_Com_Indep</u>	It is the total number of audit committee independent members
CASH FLOW FROM OPERATING ACTIVITIES	CFO	Natural log of Cash Flow from Operating activities
GROSS DOMESTIC PRODUCT	GDP	Gross Domestic Product per Capita

3.5 CONTROL VARIABLES

Furthermore, besides the independent variables that we discussed above, there are since the financial crisis of 2008, companies worldwide and especially MNE's are concentrating their efforts to be as transparent as possible and minimize the risk of fraud, scandals and huge tax penalties. To be capable of controlling the risk of fraud, special importance is given to auditing procedures. From 2002 the first regulation on auditing procedures were established with the Sarbanes Oxley Act. Nowadays, auditing committees are an important part of a company's management. The main purpose of the audit committee is to provide an oversight of the financial reporting and auditing processes. In other words, the audit committee's role is to identify possible threats that may alter the company's financial statements and financial position and present something different than the real condition. The members of the audit committee are elected from the Board of Director. The size of the audit committee, together with its independence, is a factor that can determine earnings management. It is expected that enough members in the audit committee will have a positive relationship with earnings quality because it will ensure a better and more transparent workflow of the audit committee. In addition, empirical researches provide rather mixed evidence regarding the impact of the audit committee size on earnings management. Xie et al. (2003), highlight that there is no significant connection between audit committee size and earnings management. Similarly, Lin et al. (2006) discover that audit committee size has no impact on earnings restatement. On the other hand, there are those who advocate, Yang & Krishnan (2005) that audit committee size is associated negatively with the earnings manipulation. From our results that are presented below, we can elicit that there is a significant positive association (at the 1%, 5% and 10% level of significance) between audit committee size and earnings quality.

It has been emphasized in most of the regulations, e.g., SOX., that the audit committee, as a part of the board of directors, is crucial in corporate governance. Overall, the empirical evidence documents that a strong audit committee can provide high earnings quality. However, different characteristics of the audit committee contribute to determining earnings management behavior. The committee members' independence, their financial and governance expertise, as well as the higher frequency of meetings

contribute to the mitigation of earnings management. Nevertheless, even though the high tenure implies more experience, it may also allow the collusion with management. Similarly, a larger size might result in including more experienced members in the committee but at a higher cost of communication. The terms of the directors' equity holdings might also align their own interests with the shareholders' or motivate them to conspire with the management (Klein, A 2002). On the other hand, there are those who fervently advocate (Peasnell et al. 2005) that the audit committee does not affect earnings management behavior and that it does not create any market response (Peasnell et al., 2005). Finally, Prawitt et al. (2009) mention that the higher the quality of the internal audit, the less earnings management.

Beyond the focus of audit size and audit independence, some studies have examined that Big 4 auditors are not as likely to allow earnings management to manipulate financial statements as non-Big 4 auditors (Becker et al. 1998). The reason for our investigation on discretionary accruals is that the larger the magnitude of discretionary accruals, the greater the probability of the management to manipulate the financial numbers in order to meet their needs (incentives), neglecting thus the accounting and financial reporting frameworks. We can elicit from prior researches (Brooks et al., 2011) that the lower the magnitude of the discretionary accruals, the better the audit quality. There are different factors that can influence earnings management behavior, such as the auditor's opinion, quality, fees, effort, time, experience and tenure. The auditor's opinion might provide an opinion about the occurrence and the credibility of earnings management. For instance, the auditor is expected to provide a qualified opinion after a range of occurrence of earnings management to drive a negative market response (Lennox, 2006). The auditor's quality also effects earnings management, as it is largely associated with improved earnings quality. For example, big audit firms have more economies of scale and valuable reputations, which motivate more due diligence (Eichenseher et al., 1981). In general, the auditor's quality depends on the business environment e.g., firmer investor protection policies can support the high-quality auditors in assuring high quality earnings.

4 MODEL DESCRIPTION

The purpose of this research is to identify how earnings quality responded to changes in financial and non-financial figures of a company and the market it operates. Specifically, it was pursued to examine how earnings quality is being affected by the choice of the accounting practice, the return on assets, the auditor's choice, its debt, the size of the audit committee and its independence as well as the operating cash flow and the GDP of the country it operates. The accounting practice, as analyzed in the description of the variables, was quantified as a dummy variable, obtaining values of zero or plus one. A value of zero indicates that the company used the local GAAP as an accounting practice while a value of plus one indicates the use of the International Financial Reporting Standards (IFRS). The Return on Assets (ROA) is used in the model to identify if the profitability of a company is related to the earnings quality while the use of the leverage ratio seeks to examine if the debt levels of a company can cause variation in its earnings quality. Auditor's choice is measured and quantified as a dummy variable. The auditor's choice variable obtains values of zero and plus one, depending on whether the auditor is a Big 4 company or not. If the auditor is a Big 4, the value of plus one is obtained. The audit committee variable measures how many members of the Board of Directors are assigned to the audit committee. Baxter and Cotter (2009), in their research "Audit committees and earnings quality", suggest that a larger number of the audit committee is more effective and has a positive relationship with earnings quality. Larger audit committees include more members and thus it is more likely to have more experienced members, which will achieve a more precise auditing process. The number of the independent members of the audit committee is another variable that can assist to the description of the variation in earnings quality. In literature, it is supported that a larger number of independent audit committee members indicates a better earnings quality once the auditing process becomes more efficient and biased. In specific, Beasley et al. (2000) suggest that the independent audit committee members ensure an improved financial reporting. Furthermore, Dechow et al. (1995) suggest the Operating Cash Flow variables as a variable that could measure the variations of earnings quality. Cash flow from operations is a figure that is crucial for the company. It represents the company's ability to efficiently manage its liquidity that is derived from its daily operations. While

earnings are easily managed and can differ in number depending on various reasons, most important of which the accounting practice used, cash is not easy to manipulate and can reveal useful information about earnings quality. Finally, the use of the GDP variable is used to account for systemic changes. The GDP variable can detect and measure the relationship between a country's financial condition and earnings quality of companies operating in it. Using this variable, it can be identified whether companies that operating in a country that economically grows give a greater importance in earnings quality than companies operating in countries that face a recession.

4.1 DESCRIPTIVE STATISTICS

Table 3 represents the model's statistic characteristics. In particular, the mean, the median, the maximum value, the minimum value and the standard deviation of the sample are being reported for each of the independent variables. The accounting practice and Big4 variables are dummy variable and thus the maximum and minimum value are plus one and zero respectively. From the analysis of the sample, it can be concluded that 76,53% of the companies use IFRS as an accounting practice. Regarding the ROA, from the companies selected, the median was 6.20% with a standard deviation of 11.7. The minimum ROA of the companies included in the sample is -87.8% while the maximum is 52.6%. Moreover, the median leverage of the companies of the sample is 9% while the maximum value of the debt to equity ratio equals 111%. The statistical results for the size of the audit committee suggest that the companies of the sample have on average two members in the audit committee. The maximum value of the audit committee size variables is nine while the minimum value equals zero. In addition, the companies in the sample, on average had none or one independent members in the audit committee. The maximum value of independent members was six. The last two facts, lead to the conclusion that despite having recognized the importance and the use of the audit committee, companies do not engage third parties such independent members in the control of the company's practices. Finally, the GDP variable of the sample shows that the companies were selected on average from countries that have economic growth. In particular, the median of the sample is 2.05% growth. The maximum and minimum value of the variable are -1.71% and 25% respectively.

Table 3: Descriptive statistics of all variables in the cross – sectional model

Summary Statistics, using the observations 1:1 - 171:5
(missing values were skipped)

Variable	Mean	Median	S.D.	Min	Max
<u>Acc_Prac</u>	0.834	1.00	0.374	0.00	1.00
ROA	6.71	6.20	11.7	(87.8)	52.6
<u>AuditQ</u>	0.820	1.00	0.385	0.00	1.00
Lev	0.150	0.0976	0.165	0.00	1.11
<u>Audit_Com_Size</u>	2.10	2.00	1.98	0.00	9.00
<u>Audit_Com_Indep</u>	0.636	0.00	0.991	0.00	5.00
GDP	2.07	2.05	1.07	(1.75)	25.0

4.2 CORRELATION MATRIX AND MULTICOLLINEARITY ANALYSIS

Table 4 represents the correlation matrix of the sample in order to identify if there are any unexpected multicollinearity issues in the sample.

Table 4: Correlation Matrix

	DACC	Acc_Prac	ROA	AuditQ	Lev	Audit_Com_Size	Audit_Com_Indep	OCF	GDP
DACC	1	-0.2752	0.08	0.2709	-0.196	0.1939	0.1459	0.0797	0.00
Acc_Prac		1	0.12	-0.141	0.0838	0.0938	0.0214	0.1035	-0.042
ROA			1	0.0299	-0.126	0.0551	0.0383	0.0322	0.1028
AuditQ				1	0.0532	0.1725	0.1026	0.1089	0.0516
Lev					1	0.1044	0.0345	0.1489	-0.102
Audit_Com_Size						1	0.4781	0.2366	0.1078
Audit_Com_Indep							1	-0.071	0.0374
OCF								1	-0.022
GDP									1

The correlation matrix reveals interesting information about the sample and the selected variables. Firstly, there is a 12% correlation and a 10.35% correlation between the accounting practices used the ROA and the Operating Cash Flow respectively. The

Return on Assets and the Operating Cash Flow, as well as the leverage ratio are the only variables that are actual accounting figures. The correlation between the accounting practice and those variables indicates that accounting figures can be easily altered and affected using different accounting practices. Mostly the ROA is correlated with the accounting practice and it can be attributed to the fact that the calculation of the ROA requires the accounting results of earnings and profit. Additionally, the ROA is 10.28% correlated with the GDP growth. The financial condition of a country seems to be affecting the profitability of a company. This fact, combines with the 8% correlation of the discretionary accruals and the ROA, could imply that earnings quality is associated with a country's financial condition. Due to the positive correlation, the better the economic omens and condition of a country, the better the quality of the earnings of the companies operating inside the country's economy. Regarding the Big4 variable there is a positive correlation between it and the audit committee size and the independent members of the audit committee, as well as the operating cash flow. The positive correlation with the audit committee size and its independence suggests that a company that uses a Big 4 company as its auditor has a larger audit committee and is independent. Combined with the 30% correlation with the discretionary accruals, it is safe to state that companies that are monitored by Big 4 companies have a better earnings quality and a more efficient and independent audit committee. Finally, a negative correlation of 10.24% is existent between the leverage ratio and the GDP growth while there is a positive correlation (14%) between the leverage ratio and the Operating Cash Flow. The negative relationship with the GDP growth is existent because in countries that have economic and financial growth, a raising leverage ratio reveals that the company under examination is facing financial problems due to inefficient management. On the other hand, the positive relationship of the leverage ratio and the operating cash flow can be associated with the fact that if a company gets more debt, the cash inflow is greater than the cash outflow because the main operations are financed by third party capital.

4.3 RESULTS OF THE REGRESSION MODEL

Table 3 presents the output of the regression model as performed in [Gretl](#). The p-value of the F-test is equal to zero. The F-test assumes that the models R-squared is zero and

there is no fitted line existent that could describe the variations of the dependent variable. It basically assumes that the model has no explanatory power. Because the p-value equals zero, this indicates that the null hypothesis is rejected and thus, the model's R-squared exists and it has explanatory power in all significance levels. The R-squared of the model equals 0.2247. That means that the independent variables and the estimated model can describe 22.47% in the variations of the discretionary accruals that represent the earnings quality. In addition, looking at the p-value of the t-test of the independent variables, it can be concluded that all are significant. The significance column presents at what levels each independent variable is significant. The audit committee size and independence variable are significant in the 90% significance level while the GDP and ROA variables are significant until the 95% significance level. Besides those variables, all others are significant in the 99% significance level, so it can be assumed, with a 99% confidence that the independent variables have explanatory power. Using the output provided by Gretl, the model can be written as:

$$DACC = -0.0403266 - 0.0143045Acc_Pra + 0.000140165ROA + 0.0102195AuditQ - 0.0263352Lev + 0.00155739Audit_Com_Size + 0.00140396Audit_Com_Indep + 0.000CF - 0.00121762GDP$$

Based on the output of the model, it is concluded that the variables that cause, *ceteris paribus*, a positive change in the DACC variable are the ROA, the use of a Big4 company as auditor, the size and independence of the audit committee. On the other hand, the accounting practice, the leverage ratio and the GDP variables can, *ceteris paribus*, cause a negative fluctuation in the dependent variable, while the operating cash flow, despite being significant, causes no fluctuations to the dependent variable. Moreover, the constant is negative and, all other being equal, will cause a 4% decrease in the dependent variable. Finally, based on the aforementioned reasons and the output of the model from Gretl, the three hypothesis that were assumed in the sections 2.2 and 2.3 can be rejected.

Table 5: Regression results with DACC

Model: Pooled OLS, using 821 observations					
Included 171 cross sectional units					
Dependent variable: DACC					
Variable Name	Coefficient	Std. Error	t-ratio	p-value	significance
constant	-0.0403266	0.00373539	-10.80	<0.0001	***
<u>Acc. Prac.</u>	-0.0143045	0.00172098	-8.312	<0.0001	***
ROA	0.000140165	0.00	2.541	0.0112	**
<u>AuditQ</u>	0.0102195	0.00168191	6.076	<0.0001	***
Lev	-0.0263352	0.00387996	-6.787	<0.0001	***
<u>Audit Com Size</u>	0.00155739	0.000380428	4.094	<0.0001	***
<u>Audit Com Indep</u>	0.00140396	0.000728360	1.928	0.0543	*
OCF	0.00	0.00	1.850	0.0647	*
GDP	-0.00121762	0.000591478	-2.059	0.0399	**
Mean dependent var		-0.040645	S.D. dependent var		0.019996
Sum squared resid		0.254189	S.E. of regression		0.017704
R-squared		0.224723	Adjusted R-squared		0.216119
F(8,811)		2.611.970	P-value (F)		0.00
Log-likelihood		2.151.974	<u>Akaike criterion</u>		-4283.948
Schwarz criterion		-4236.842	<u>Hannan-Quinn</u>		-4265.874
rho		0.943575	Durbin-Watson		0.073853

As far as the H1 states that there is negative association between the audit quality and the occurrence of earnings management, we can elicit from Table 5 that this hypothesis is not supported while (coefficient = 0.0102195 and $p < 0.0001$). This is not in consistent with prior researches with those that examine the connection between the audit quality and the discretionary accruals. Furthermore, regarding the H2 and H3, that states that there is significantly negative association between audit committee independence and audit committee size with the occurrence of earnings management, again we can easily

highlight that this hypothesis is not supported (coefficient = 0.00140396 and $p = 0.0543$) and (coefficient = 0.00155739 and $p < 0.0001$) respectively. This is not in consistent with previous studies, such as Peasnell, K. et al. (2005) and Lin, J. et al. (2006) that empirically describe the strong negative relation with lower levels of earnings management.

5 CONCLUSION AND LIMITATION

The audit committees' role and the quality of audit has come under considerable scrutiny due to multiple corporate accounting scandals around the world. An assertion that is provided by the auditors contributes credibility and reliability on financial statements, therefore, auditors are important gatekeepers for safeguarding earnings' quality and for the protection of the shareholders' welfare. It is recommended that there is a strong relation between corporate governance and the effectiveness of regulatory initiatives to pass through the organization and ensure a better compliance with rules via designated officers, audit committees, and other internal structures. In the corporate governance arrangements, the audit committee is considered one of the most crucial mechanisms and is responsible for oversight of matters related to financial reporting, as well as auditing and the overall corporate governance to maintain their independence, the regulation has appointed the responsibility of managing the auditors to the audit committee instead of the management. In this sense, auditors are expected to avoid earnings management, in order to protect their reputations and avoid the costly litigation. Therefore, the purpose of this investigation is to present an overview of discretionary accruals for the largest based on the market capitalization characteristic European firms, during the 2013 – 2017 time period and to examine the association between the audit committee size, audit committee independence and the audit quality as a proxy of Big 4 audit firms, for 192 active listed European companies. Moreover, in this paper, we formulate three hypotheses tests that are in line with prior literature. Our evidence is not in consistent with none of these three hypotheses, while our findings reveal that a strong positive association between audit committee size, audit committee independence and audit quality with discretionary accrual as a proxy for earnings quality. This indicates that not only audit committee size, audit committee

independence is associated positively with higher levels of earnings quality but also audit quality provides a strong relationship with higher levels of discretionary accrual, thus higher levels of earnings quality.

We acknowledge the fact that our study overall should not be taken at face value but rather interpreted with discretion because the research is subject to a number of limitations. Firstly, as far as the estimation of earnings quality is concerned, we used discretionary accruals as a benchmark. This estimating method of accruals could be a noisy proxy when trying to estimate earnings quality. Despite this fact, we took in consideration one of the most reliable and commonly used methods in to ensure the robustness of our results. Moreover, our sample size is potentially biased while it comprised with only listed companies which are considered to have the highest market cap and thus to be the leaders in their sector.

Finally, our study contributes to the existing literature by documenting the impact of audit quality, audit committee size and audit committee independence to earnings management on European listed firms. It seems that earnings management will be of interest to the research community for some time, as it has always fascinated researchers.

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